

Remarks

The Office Action mailed January 12, 2006, and made final, has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1-20 are now pending in this application. Claims 1-20 stand rejected.

The final rejection of Claims 1-7 under 35 U.S.C. § 103(a) as being unpatentable over Zeiser (U.S. 5,115,636) in view of Hollis et al. (U.S. 4,300,774) is respectfully traversed.

Zeiser describes a borescope plug (10) for sealing opposing holes (11 and 13) in opposing walls (9 and 14). The borescope plug includes a narrow axial shaft (12) having a pair of opposing ends (12A and 12B). The first end (12A) includes a semispherical sealing means (32) designed to seat within a conically shaped seal hole (11) defined in the wall (9). The second end (12B) includes a circular base (16) that is slidably mounted within an annular borescope plug housing (20). The second end (12B) is retained in the plug housing (20) by a snap ring (18), and the plug housing (20) is retained within a bore (70) by a split ring (50). A spring (40) positioned within the plug housing (20) is retained therein by a base (16) and the snap ring (18). The spring (40) is positioned against a plug housing back end (48) such that the spring (40) biases the shaft (12) towards the seal hole (11). A travel limiter (42) within the plug house (20) limits compression of the spring (40). A cover plate (76) fastened to the second wall (14) retains the borescope plug (10) in position. The back end (48) is then manipulated with a common socket wrench to enable insertion and removal of the borescope plug (10). Notably Zeiser does not describe nor suggest using a compression seal ring positioned within a seal plate and that engages a wall defining a cavity.

Hollis et al. describe a removable sealing plug for spaced apart wall structures. The sealing plug (10) includes an axial shaft (12) having a pair of opposing ends (12A and 12B). The end (12A) includes a fastening means (14) and a sealing means (16). A second sealing means, such as a plug, (20) mates with the shaft (12). The plug (20) includes a fastening

means (22), a sealing means (24), and a mating means (26) for mating with the shaft (12). A compressible spring (30) is coupled to a shaft mating means (18) and positioned between the outer surface of the mating means (18) and the inner surface of the plug (20). The spring (30) biases the mating means (18) and the plug mating means (26) together. In this position, the shaft (12) and the plug (20) are rotationally engaged such that rotational torque induced to the plug (20) is transferred to the shaft (12). The spring (30) also absorbs the axial and transverse movements of the shaft (12). In one embodiment, the borescope plug (10) also includes a probe (40) for sensing properties, such as temperature and pressure. Notably Hollis et al. do not describe nor suggest using a compression seal ring positioned within a seal plate and that engages a wall defining a cavity.

Claim 1 recites a method of mounting an instrument probe using an adapter post. The method comprises “coupling an attachment end of the adapter post to a first wall defined between a cavity and an annulus . . . coupling an opposite sealing end of the adapter post to a second wall defined between the annulus and an ambient area such that the adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by the second wall”

Neither Zeiser nor Hollis et al., considered alone or in combination, describe or suggest a method of mounting an instrument probe as is recited in Claim 1. Specifically, no combination of Zeiser and Hollis et al. describes or suggests a method of mounting an instrument probe wherein an adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by a wall defining a cavity. Rather, in contrast to the present invention, Zeiser describes a borescope plug having a seal ring positioned between a plug housing and a bore such that the ring does not engage a wall defining a cavity, and Hollis et al. describe sealing holes in a gas turbine engine using an axial shaft coupled to a sealing plug having a spring. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Zeiser in view of Hollis et al.

Claims 2-7 depend, directly or indirectly, from independent claim 1. When the recitations of Claims 2-7 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 2-7 likewise are patentable over Zeiser in view of Hollis et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-7 be withdrawn.

The final rejection of Claims 12-19 under 35 U.S.C § 103(a) as being unpatentable over Zeiser in view of Shah et al. (U.S. 4,132,114) is respectfully traversed.

Zeiser is described above. Shah et al. describe a temperature probe assembly for a gas turbine engine having an upper tube. The upper tube includes a flange (52) with a unitary neck portion (54) and a central opening (56) therethrough. A cap (58) is welded to the upper end of the neck portion (54) and has an aperture extending therethrough to receive an upper hollow shaft (24) of a probe. The aperture is sized and threaded at an opposite end for receiving the probe head (20). A collar member (60) is welded to the end of the shaft (24) to prevent outward withdrawal of the shaft (24). A lower tube (28) includes a collar member (64). A retaining plate (66) including a central aperture (68) is sized to receive all of the lower tube except the collar (64). A coil spring (50) is inserted over the tube to seat against the inner face of the retaining plate. The tube is sized to receive a temperature probe to enable a temperature of a gas turbine engine to be determined. Notably, Shah et al. do not describe nor suggest an instrument probe having a compression seal ring that is positioned to engage a wall defining a cavity.

Claim 12 recites a mounting assembly for mounting an instrument probe within a cavity, wherein the mounting assembly comprises “an adapter post . . . a seal plate comprising an aperture sized to receive said adapter post therethrough, a first face and a second opposing face, said first face comprising a first face seal groove substantially circumscribing said aperture, said first face seal groove is configured to receive at least a portion of a compression seal ring that is positioned to engage a wall defining the cavity . . .”

Neither Zeiser nor Shah et al., considered alone or in combination, describe or suggest a mounting assembly for mounting an instrument probe as is recited in Claim 12.

Specifically, no combination of Zeiser and Shah et al. describe nor suggest a mounting assembly for an instrument probe wherein an adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by a wall defining a cavity. Rather, in contrast to the present invention, Zeiser describes a borescope plug having a seal ring positioned between a plug housing and a bore such that the ring does not engage a wall defining a cavity, and Shah et al. describe inserting a temperature probe into a tube to determine the temperature of a gas turbine engine. Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Zeiser in view of Shah et al.

Claims 13-19 depend, directly or indirectly, from independent claim 12. When the recitations of Claims 13-19 are considered in combination with the recitations of Claim 12, Applicants submit that Claims 13-19 likewise are patentable over Zeiser in view of Shah et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 12-19 be withdrawn.

The final rejection of Claims 8-10 under 35 U.S.C § 103(a) as being unpatentable over Zeiser in view of Hollis et al. and further in view of Deak et al. (U.S. 5,662,418) is respectfully traversed.

Zeiser and Hollis et al. are described above. Deak et al. describe a high temperature probe (10) including a probe tube (11) including an upper part (11A) and a lower part (11B). The upper part (11A) has a larger external diameter than the lower part (11B). The probe tube (11) also includes an annular groove (18) which accommodates sealing rings (28). In the region of the annular groove (18), the probe tube (11) is held in a flange (27). In the interior of the probe tube (11) there is a first internal drill hole (12) which begins at the upper end of the probe tube (11) and goes into a second internal drill hole (13). The second internal

drill hole (13) in-turn goes into flow-through channels (14 and 15). Within the probe tube (11) there is also a probe element (20) which includes two ceramic tubes (20a and 20b). The probe tube (11) is closed at the top with a lead-through (19) including a centrally inserted lead-through tube (23) through which wires of the thermocouples (31 and 32) are lead. Notably, Deak et al. do not describe nor suggest using a compression seal ring positioned within a seal plate and that engages a wall defining a cavity.

Claims 8-10 depend, directly or indirectly, from independent Claim 1. Claim 1 recites a method of mounting an instrument probe using an adapter post, wherein the method comprises “coupling an attachment end of the adapter post to a first wall defined between a cavity and an annulus . . . coupling an opposite sealing end of the adapter post to a second wall defined between the annulus and an ambient area such that the adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by the second wall”

Neither Zeiser, Hollis et al. nor Deak et al., considered alone or in combination, describe or suggest a method of mounting an instrument probe as is recited in Claim 1. Specifically, no combination of Zeiser, Hollis et al. or Deak et al. describes or suggests a method of mounting an instrument probe wherein an adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by a wall defining a cavity. Rather, in contrast to the present invention, Zeiser describes a borescope plug having a seal ring positioned between a plug housing and a bore such that the ring does not engage a wall defining a cavity, Hollis et al. describe sealing holes in a gas turbine engine using an axial shaft coupled to a sealing plug having a spring, and Deak et al. merely describe a high temperature probe having a seal ring between the probe and a flange coupled to a gas turbine engine. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Zeiser in view of Hollis et al. and further in view of Deak et al.

Claims 8-10 depend, directly or indirectly, from independent claim 1. When the recitations of Claims 8-10 are considered in combination with the recitations of Claim 1,

Applicants submit that Claims 8-10 likewise are patentable over Zeiser in view of Hollis et al. and further in view of Deak et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 8-10 be withdrawn.

The final rejection of Claim 11 under 35 U.S.C § 103(a) as being unpatentable over Zeiser in view of Hollis et al. and further in view of Shah et al. is respectfully traversed.

Zeiser, Hollis et al., and Shah are described above.

Claim 11 depends, directly or indirectly, from independent Claim 1. Claim 1 recites a method of mounting an instrument probe using an adapter post, wherein the method comprises “coupling an attachment end of the adapter post to a first wall defined between a cavity and an annulus . . . coupling an opposite sealing end of the adapter post to a second wall defined between the annulus and an ambient area such that the adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by the second wall”

Neither Zeiser, Hollis et al. nor Shah et al., considered alone or in combination, describe or suggest a method of mounting an instrument probe as is recited in Claim 1. Specifically, no combination of Zeiser, Hollis et al. or Shah et al. describes or suggests a method of mounting an instrument probe wherein an adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by a wall defining a cavity. Rather, in contrast to the present invention, Zeiser describes a borescope plug having a seal ring positioned between a plug housing and a bore such that the ring does not engage a wall defining a cavity, Hollis et al. describe sealing holes in a gas turbine engine using an axial shaft coupled to a sealing plug having a spring, and Shah et al. describe inserting a temperature probe into a tube to determine the temperature of a gas turbine engine. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Zeiser in view of Hollis et al. and further in view of Shah et al.

Claim 11 depends, directly or indirectly, from independent claim 1. When the recitations of Claim 11 are considered in combination with the recitations of Claim 1, Applicants submit that Claim 11 likewise is patentable over Zeiser in view of Hollis et al. and further in view of Shah et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 11 be withdrawn.

The final rejection of Claim 20 under 35 U.S.C § 103(a) as being unpatentable over Zeiser in view of Shah et al. is respectfully traversed.

Zeiser and Shah et al. are described above.

Claim 20 recites a mounting assembly for mounting a temperature probe to a gas turbine engine, wherein the temperature probe mounting assembly comprises “an adapter post . . . a seal plate comprising an aperture sized to receive said adapter post therethrough, a first face, and an opposing second face, said first face comprises a circumferential seal groove circumscribing said aperture, said seal groove sized to receive at least a portion of a compression seal ring therein, said compression seal ring engaged by a wall of the gas turbine engine”

Neither Zeiser nor Shah et al., considered alone or in combination, describe or suggest a mounting assembly as is recited in Claim 20. Specifically, no combination of Zeiser and Shah et al. describe or suggest a mounting assembly for an instrument probe wherein an adapter post is inserted through a seal plate having at least one compression seal ring that is engaged by a wall defining a cavity. Rather, in contrast to the present invention, Zeiser describes a borescope plug having a seal ring positioned between a plug housing and a bore such that the ring does not engage a wall defining a cavity, and Shah et al. describe inserting a temperature probe into a tube to determine the temperature of a gas turbine engine. Accordingly, for at least the reasons set forth above, Claim 20 is submitted to be patentable over Zeiser in view of Shah et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 20 be withdrawn.

Moreover, Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Zeiser, Hollis, Shah, and Deak considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Zeiser with one or more of Hollis, Shah, and Deak because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching.

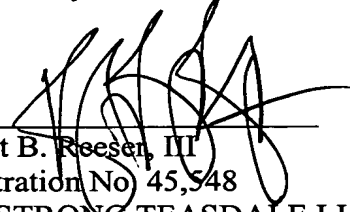
As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection

is based on a combination of teachings selected in an attempt to arrive at the claimed invention. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for these reasons, along with the reasons given above, Applicants request that the Section 103 rejections of the Claims be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'R. B. Reesen, III', is written over a horizontal line.

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